

Bachelor of Science (BS)



The Association of Technology, Management, and Applied Engineering

Technology management is a field of study designed to prepare technical and/or management-oriented professionals for employment in business, industry, education, and government. Technology management is primarily involved with the management, operation, and maintenance of complex technological systems while engineering and engineering technology are primarily involved with the design and installation of these systems.

Technology management: telecommunications & computer networking students will...

- Be prepared to design, implement, and support networked systems in both standard and enterprise settings.
- Gain a solid foundation in the hardware and architecture of telecommunication networks and systems, operating systems and applications, system design and analysis, networking theory and solutions, types of networks including fiber optics and wireless, network management and control, network and flow optimization, network security, configuring, and troubleshooting.
- Be provided with comprehensive knowledge, skills, and necessary training to pursue careers as information technology professionals.
- Learn concepts of network design, integration, security, administration, and management of computing and telecommunications technologies.
- Learn how to assess and identify user needs and configure and implement systems using current and emerging technologies in the networking and telecommunications field.

Career Planning

Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

The Office of Career Services in Academic Hall 057 can provide students with professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

Demonstrated Career Proficiency is a Requirement of all Southeast Students		
CL001	First Semester	Students connect academic career planning by completing an online career assessment
CL002	Second Semester	Students learn more about resources available to enhance academic and career planning
CL003	Junior Year	Students learn about continued career planning, job search strategies, and networking
CL004	Senior Year	Students learn about resume development, professional communication, interviewing, and transitioning to the first job from college

Career Opportunities

- Information Technology Specialist
- Network Administrator/Specialist
- Network Engineer
- Network Manager
- System Administrator
- Telecommunications Specialist
- Technical Specialist

Equipment and Computer Programs

We have developed laboratories to provide our students with an opportunity to master a working knowledge of the basic fundamentals to advanced concepts in network applications and systems administration. Courses are accompanied by hands-on laboratories in which students will:

- Design, configure, and set up networked and telecommunications systems, client server programming, and network administration.
- Configure network hardware and software on Linux and Microsoft-based microcomputers that are connected to wireless systems, the Internet, and a LAN/WAN with switches and routers.
- Perform network protocol analysis and network performance using test equipment and hardware tools such as OptiView, Signal Pro, NS, Qualnet, and Opnet.
- Work with multi-user, multi-tasking network operating systems such as UNIX, Linux, and Windows Server with a focus on network administration.
- Learn principles of communication systems, communication protocols such as Kermit, HDLC, and performance measurement of wired and wireless systems.
- Learn principles and assembling of computers and installation, maintenance, troubleshooting, and repair of computer peripherals and system expansion, including operating systems, memory, disk drives, printers, and displays.
- Develop WWW presence with Web technologies using HTML, scripting languages, and develop database connectivity.
- Learn concepts of systematic ongoing processes of network analysis, design, implementation, maintenance, and security management.
- Practice experiential problem-solving skills through a senior design capstone course for students to work in teams to solve open-ended industrial projects.

Special Options with Technology Management

Southeast Missouri State University offers an accelerated master's degree for current Southeast technology management students. For more information, please see the MS: Technology Management degree map.

Southeast also offers a Master of Science in Technology Management.

Telecommunications & Computer Networking Option

To learn more
Office of Admissions
(573) 651-2590
admissions@semo.edu
semo.edu

To explore
the College of
Science, Technology and
Agriculture online, visit
www.semo.edu/costa

For advising
Center for Academic Advising - North
(573) 651-5090
www.semo.edu/advising
advisingnorth@semo.edu

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This is a guide based on the 2017-2018 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use DegreeWorks to monitor their individual progress.

CURRICULUM CHECKLIST**TECHNOLOGY MANAGEMENT: TELECOMMUNICATIONS & COMPUTER NETWORKING OPTION – 85 hours****Required Courses:**

- ___ IM300 Technical Communication (3)
- ___ IM301 Industrial Safety (3)
- ___ IM311 Statistical Process Control (3)
- ___ IM419 Industrial Supervision (3)
- ___ IM506 Projects in IET (3)
- ___ MA133 Plane Trigonometry (3)
- ___ MA134 College Algebra (3)
- ___ MA139 Applied Calculus (3)
- ___ MN220 Engineering Econ Analysis (3)
- ___ MN260 Technical Computer Programming Applications (3)
- ___ PH120/020 Introductory Physics I (5)
- ___ PH121/021 Introductory Physics II (5)
- ___ SW207 Understanding Cultural & Social Diversity (3)
- ___ UI410 Manufacturing Research in a Global Society (3)

Telecommunications & Computer Networking Option:

- ___ ET160 Basic Electricity and Electronics (3)
- ___ ET245 Logic Circuits (3)
- ___ TN255 Microcomputer Maintenance & Troubleshooting (3)
- ___ TN275 Introduction to Networks (3)
- ___ TN375 Routing/Switching Essentials (3)
- ___ TN395 Server Maintenance & Troubleshooting (3)
- ___ TN425 Wireless Communication & Mobile Data Networks (3)
- ___ TN435 Network Security (3)
- ___ TN475 Scaling Networks (3)
- ___ TN563 Connecting Networks (3)
- ___ TN565 Network Management (3)
- ___ TN566 IP Telephony (3)

Choose 3 hours:

- ___ CY201 Introduction to Cybersecurity (3)
- ___ IM317 Cooperative Industrial Internship (3)

University Studies Requirements (not already listed above) – 36 hours:

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Behavioral Systems, Living Systems, Development of a Major Civilization, Political Systems

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	IM300	3
	EN100	3	IM301	3
	ET160	3	MA133	3
	MA134	3	MN260	3
	TN255	3	Written Expression	3
Total	15	Total	15	
SECOND YEAR	ET245	3	PH121	5
	MA139	3	SW207	3
	PH120	5	TN375	3
	TN275	3	TN395	3
			Oral Expression	3
Total	14	Total	17	
THIRD YEAR	IM311	3	MN220	3
	TN425	3	TN435	3
	TN475	3	TN563	3
	Literary Expression	3	Behavioral Systems	3
	Living Systems	3	Elective	3
Total	15	Total	15	
FOURTH YEAR	CY201 or IM317	3	TN565	3
	IM419	3	UI410	3
	IM506	3	Artistic Expression	3
	TN566	3	Develop of a Major Civ	3
	Political Systems	3	Elective	2
Total	15	Total	14	

Degree requirements for all students: a minimum of 120 credit hours, completion of University Studies program, completion of 39 senior division hours (300-599), career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.

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